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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN B. CAYTON, J. BRANDT HAMBY, and
J. KEVIN LEONARD

Appeal 2007-4176
Application 09/641,021
Technology Center 3600

Decided: March 24, 2008

Before WILLIAM F. PATE, III, HUBERT C. LORIN, and ANTON W. FETTING, *Administrative Patent Judges*.
FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

26 Alan B. Cayton, J. Brandt Hamby, and J. Kevin Leonard (Appellants)
27 seek review under 35 U.S.C. § 134 of a final rejection of claims 1-92, the
28 only claims pending in the application on appeal.

1 We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b)
2 (2002).

3 4 We REVERSE

5 The Appellants invented a software product that enables employers to
6 generate a customized application program executable to interact with job
7 candidates and to determine the qualified candidates for a position with the
8 employer. The employer enters desired hiring criteria, and the software
9 product then generates a customized application program that applies the
10 desired hiring criteria to determine the qualified candidates for the employer
11 (Specification 7:8-16). An understanding of the invention can be derived
12 from a reading of exemplary claim 1, which is reproduced in the Analysis
13 section below.

14 This appeal arises from the Examiner's final Rejection, mailed January
15 19, 2006. The Appellants filed an Appeal Brief in support of the appeal on
16 May 2, 2006. An Examiner's Answer to the Appeal Brief was mailed on
17 April 18, 2007. A Reply Brief was filed on August 15, 2006.

PRIOR ART

19 The Examiner relies upon the following prior art:

Williams US 6,618,734 B1 Sep. 9, 2003

Smith US 6,701,313 B1 Mar. 2, 2004

REJECTIONS

21 Claims 1-2, 6-26, 28-34, and 36-44, 46-76, and 78-87 stand rejected
22 under 35 U.S.C. § 102(e) as anticipated by Williams.

1 Claims 3-5, 35, and 88-92 stand rejected under 35 U.S.C. § 103(a) as
2 unpatentable over Williams and Smith.

3 Claims 27, 45, and 77 stand rejected under 35 U.S.C. § 103(a) as
4 unpatentable over Williams.

ISSUES

6 The issues pertinent to this appeal are

- 7 • Whether the Appellants have sustained their burden of showing that
- 8 the Examiner erred in rejecting claims 1-2, 6-26, 28-34, and 36-44,
- 9 46-76, and 78-87 under 35 U.S.C. § 102(e) as anticipated by
- 10 Williams.
- 11 • Whether the Appellants have sustained their burden of showing that
- 12 the Examiner erred in rejecting claims 3-5, 35, and 88-92 under 35
- 13 U.S.C. § 103(a) as unpatentable over Williams and Smith.
- 14 • Whether the Appellants have sustained their burden of showing that
- 15 the Examiner erred in rejecting claims 27, 45, and 77 under 35 U.S.C.
- 16 § 103(a) as unpatentable over Williams.

17 The pertinent issue turns on whether Williams describes one software
18 program that can generate another software program based on specification
19 data entered.

FACTS PERTINENT TO THE ISSUES

21 The following enumerated Findings of Fact (FF) are supported by a
22 preponderance of the evidence.

1 *Facts Related to Appellants' Disclosure*

2 01. FIGURE 4 shows an exemplary flow diagram for the
3 operational flow of an application generator for generating one or
4 more customized application programs for qualifying candidates
5 according to an employer's hiring criteria (Specification 9; Fig. 4).

6 02. The disclosure contains no lexicographic definition of
7 "application generator."

8 03. The ordinary and customary meaning of "application generator"
9 is software that generates application programs from descriptions
10 of the problem rather than by traditional programming. It is at a
11 higher level and easier to use than a high-level programming
12 language such as C/C++ or COBOL. One statement or descriptive
13 line may generate a huge routine or an entire program. Generators
14 used for complex program development allow if-then-else
15 programming to be expressed along with the simpler descriptive
16 of the inputs and required outputs.¹

17 *Williams*

18 04. Williams is directed to an automated interview and data
19 collection system using job-related questions to objectively
20 measure a job candidates work ethic, adaptability, teamwork,
21 customer-service orientation, dependability, and other traits. It

¹PC Magazine On-Line Encyclopedia
http://www.pcmag.com/encyclopedia_term/0,2542,t=application+generator&i=37909,00.asp

1 provides instantaneous automated evaluation of candidate
2 qualifications through interview questions customized for the
3 client's or employer's needs. The system captures all necessary and
4 desired employment data of a prospective employee, and is
5 accessible daily by the client/employer for evaluation according to
6 that client/employer criteria (Williams 2:19-40).

7 05. Williams uses a profiling process in which background
8 information regarding a position, such as tasks performed and
9 work environment, is obtained and entered into the system. The
10 information is then analyzed to determine ideal characteristics for
11 a position, including skills, abilities, and behavioral traits
12 (Williams 3:30-38).

13 06. Williams describes a second tier of automated interview
14 questions that allow the system to determine which applicants best
15 match the criteria set by the client (Williams 3:2-5). This
16 interview is entered into the system (Williams 3:62-64).

17 07. Once preliminary background information regarding the
18 applicant is collected and the system determines that the applicant
19 qualifies to advance to the substantive stages of the interview
20 process, Williams' system administers a Bona Fide Occupational
21 Qualifier ("BFOQ") interview. Upon completion of the BFOQ
22 interview, candidates who satisfy the criteria set by the client for
23 this stage will proceed to the Behavioral Assessment Interview, in
24 which the candidate responds to customized and validated
25 assessment questions. The applicant's responses and response

1 times are monitored to determine alternate directions in which the
2 interview may proceed. Those who "best" match the criteria set
3 by the client for this stage are advised that they pre-qualify for a
4 follow-up interview and are given instructions regarding the
5 follow-up interview (Williams 5:48-67).

6 *Smith*

7 08. Smith is directed to a method of data object generation and
8 matching and addresses the problem of matching coincidental
9 needs relating to an activity or entity by the provision of a
10 classification system specific to the particular activity or entity to
11 be traded or exchanged which allows parties to the trade to define
12 their requirements in a standardized format (Smith 2:48-57).

13 09. Smith stores predefined classification categories containing
14 predefined user-selectable attributes; displays the classification
15 categories to a user for selection of one or more attributes; stores
16 the selected attributes in the form of a data object of a second
17 type; and compares and matches the stored attributes of the data
18 object of the second type with the stored pre-selected attributes of
19 a data object of the first type (Smith 2:58 – 3:11)

20 *Facts Related To Differences Between The Claimed Subject Matter And*
21 *The Prior Art*

22 10. Neither Williams nor Smith describe a program that generates
23 another application program based on data entered, that is, an
24 application generator.

1 *Facts Related To The Level Of Skill In The Art*

2 11. Neither the Examiner nor the Appellants has addressed the level
3 of ordinary skill in the pertinent art of application generation. We
4 will therefore consider the cited prior art as representative of the
5 level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261
6 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific
7 findings on the level of skill in the art does not give rise to
8 reversible error ‘where the prior art itself reflects an appropriate
9 level and a need for testimony is not shown’”) (quoting *Litton*
10 *Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163
11 (Fed. Cir. 1985)).

12 12. One of ordinary skill in the software programming arts at the
13 time of the invention knew that software programs that accepted
14 data describing specifications for another program and then
15 generated another application program were known as application
16 generators.

17 *Facts Related To Secondary Considerations*

18 13. There is no evidence on record of secondary considerations of
19 non-obviousness for our consideration.

20

21 PRINCIPLES OF LAW

22 *Claim Construction*

23 During examination of a patent application, pending claims are
24 given their broadest reasonable construction consistent with the

1 specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969);
2 *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1369, (Fed. Cir.
3 2004).

4 Limitations appearing in the specification but not recited in the claim are
5 not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364,
6 1369 (Fed. Cir. 2003) (claims must be interpreted “in view of the
7 specification” without importing limitations from the specification into the
8 claims unnecessarily)

9 Although a patent applicant is entitled to be his or her own lexicographer
10 of patent claim terms, in *ex parte* prosecution it must be within limits. *In re*
11 *Corr*, 347 F.2d 578, 580 (CCPA 1965). The applicant must do so by placing
12 such definitions in the Specification with sufficient clarity to provide a
13 person of ordinary skill in the art with clear and precise notice of the
14 meaning that is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480
15 (Fed. Cir. 1994) (although an inventor is free to define the specific terms
16 used to describe the invention, this must be done with reasonable clarity,
17 deliberateness, and precision; where an inventor chooses to give terms
18 uncommon meanings, the inventor must set out any uncommon definition in
19 some manner within the patent disclosure so as to give one of ordinary skill
20 in the art notice of the change).

21 *Anticipation*

22 "A claim is anticipated only if each and every element as set forth in the
23 claim is found, either expressly or inherently described, in a single prior art
24 reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628,

1 631 (Fed. Cir. 1987). "When a claim covers several structures or
2 compositions, either generically or as alternatives, the claim is deemed
3 anticipated if any of the structures or compositions within the scope of the
4 claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351 (Fed.
5 Cir. 2001). "The identical invention must be shown in as complete detail as
6 is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d
7 1226, 1236 (Fed. Cir. 1989). The elements must be arranged as required by
8 the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology
9 is not required. *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

10 *Obviousness*

11 A claimed invention is unpatentable if the differences between it and
12 the prior art are "such that the subject matter as a whole would have been
13 obvious at the time the invention was made to a person having ordinary skill
14 in the art." 35

15 U.S.C. § 103(a) (2000); *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727 (2007);

16 *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

17 In *Graham*, the Court held that that the obviousness analysis is
18 bottomed on several basic factual inquiries: "[1] the scope and content of
19 the prior art are to be determined; [2] differences between the prior art and
20 the claims at issue are to be ascertained; and [3] the level of ordinary skill
21 in the pertinent art resolved." 383 U.S. at 17. *See also KSR Int'l v. Teleflex*
22 *Inc.*, 127 S.Ct. at 1734. "The combination of familiar elements according to
23 known methods is likely to be obvious when it does no more than yield
24 predictable results." *KSR*, at 1739.

1 “When a work is available in one field of endeavor, design incentives
2 and other market forces can prompt variations of it, either in the same field
3 or a different one. If a person of ordinary skill can implement a predictable
4 variation, § 103 likely bars its patentability.” *Id.* at 1740.

5 “For the same reason, if a technique has been used to improve one
6 device, and a person of ordinary skill in the art would recognize that it would
7 improve similar devices in the same way, using the technique is obvious
8 unless its actual application is beyond his or her skill.” *Id.*

9 “Under the correct analysis, any need or problem known in the field
10 of endeavor at the time of invention and addressed by the patent can provide
11 a reason for combining the elements in the manner claimed.” *Id.* at 1742.

12 *Automation of a Known Process*

13 It is generally obvious to automate a known manual procedure or
14 mechanical device. Our reviewing court stated in *Leapfrog Enterprises Inc.*
15 *v. Fisher-Price Inc.*, 485 F.3d 1157 (Fed. Cir. 2007) that one of ordinary
16 skill in the art would have found it obvious to combine an old
17 electromechanical device with electronic circuitry “to update it using
18 modern electronic components in order to gain the commonly understood
19 benefits of such adaptation, such as decreased size, increased reliability,
20 simplified operation, and reduced cost. . . . The combination is thus the
21 adaptation of an old idea or invention . . . using newer technology that is
22 commonly available and understood in the art.” *Id.* at 1163.

1 ANALYSIS

2 *Claims 1-2, 6-26, 28-34, and 36-44, 46-76, and 78-87 rejected under 35*
3 *U.S.C. § 102(e) as anticipated by Williams.*

4 The Appellants argue these claims as a group.

5 Accordingly, we select claim 1 as representative of the group.

6 37 C.F.R. § 41.37(c)(1)(vii) (2007).

7 The Examiner found that Williams described all of the limitations of
8 claim 1 which is reproduced below [bracketed matter, including citations to
9 where the Examiner found support, and some paragraphing added] (Answer
10 3-4:¶ 3).

11 1. A method for qualifying candidates for employment with an
12 employer, said method comprising:

13 [1] executing a computer program,

14 said computer program receiving as input from said
15 employer a desired hiring criteria of said employer;
16 [Williams 3:30-64]

17 [2] based on said desired hiring criteria of said employer,

18 said computer program generating at least one
19 customized application program

20 that is executable to interact with candidates for
21 employment with said employer and

22 determine whether each of said candidates is qualified for
23 employment with said employer; [Williams 3:2-5 and 62-
24 64]

25 [3] allowing said candidates access to the at least one generated
26 customized application program; and [Williams 5:48-67]

27 [4] responsive to input from each of said candidates to the at
28 least one generated customized application program,

1 said at least one generated customized application
2 program automatically determining whether each of said
3 candidates qualifies for a position of employment with
4 the employer. [Williams 5:53-67]

5 The Appellants contend that Williams does not describe having one
6 program generate the application program as in claim 1 (Br. 16-19) and that
7 Williams is unavailable as prior art because the Appellants conceived of the
8 invention prior to the date of Williams' filing and diligently reduced to
9 practice after the date of Williams' filing (Br. 10-16).

10 We agree that Williams does not describe having one program generate
11 the application program as in claim 1.

12 First, we find that whether Williams describes the remaining limitations
13 of claim 1 is not under contention, and that the Examiner was correct in
14 finding that Williams did describe those limitations (FF 04, 05, 06, & 07).

15 We next examine all of the citations the Examiner relied on to support
16 the finding that Williams described on program generating another program.
17 All of those cited portions describe a program that provides an interactive
18 interview, but none describe how that program is generated (FF 06). The
19 Examiner responded that Williams also describes generating a customized
20 employment program at Williams 8:11-15 and Figs. 5-6 (Answer 20:¶ 9).
21 This portion refers to Williams' Behavioral Assessment Interview. While
22 this interview is also interactive, again Williams does not describe how it is
23 generated. We have examined the entirety of Williams and cannot find any
24 description or even suggestion that Williams uses one program that accepts
25 specification inputs to create another application program (FF 10).

1 The clearest indication the Examiner provides as to how Williams might
2 describe this limitation is in referring once again to Williams' col. 3 in
3 which questions are entered into the system. The Examiner concludes that
4 the system then generates, and places quotation marks around the word
5 "generates" as if to suggest a more subtle interpretation, the finished
6 program (Answer 21: Top ¶). Thus, it would appear the Examiner is
7 suggesting that the generation occurs either through conventional
8 compilation of a source program, or through the changes in a program's state
9 brought about by entry of data.

10 Neither of these constructions would meet the limitations of claim 1.
11 First we find that one of ordinary skill knew that programs, such as that in
12 claim 1, that accepted data describing specifications for another program and
13 then generated another application program were known as application
14 generators (FF 12). We further find that this is consistent with the
15 Appellants' Specification, which describes using an application generator to
16 perform the step of generating an application program (FF Error!
17 Reference source not found.), and the usual meaning of an application
18 generator (FF 01 & 03).

19 A conventional compiler program does generate an executable program
20 from source code, but does not accept specification data to generate an
21 application program. Entering data within an existing program does change
22 its internal state, and therefore might be considered to have changed the
23 program, but it does not generate a new program. Thus neither construction
24 implied by the Examiner would meet the limitations of claim 1.

1 Since this issue is dispositive, the Appellants' arguments regarding
2 whether Williams is available as prior art are moot. All of the remaining
3 independent claims have a similar limitation of one program accepting
4 specification inputs and generating another application program, and all of
5 the dependent claims incorporate this limitation by virtue of their
6 dependence.

7 The Appellants have sustained their burden of showing that the
8 Examiner erred in rejecting claims 1-2, 6-26, 28-34, and 36-44, 46-76, and
9 78-87 under 35 U.S.C. § 102(e) as anticipated by Williams.

10 *Claims 3-5, 35, and 88-92 rejected under 35 U.S.C. § 103(a) as*
11 *unpatentable over Williams and Smith.*

12 Claims 3-5, 35, and 88-92 depend from claims 1, 30, 54, and 62 and
13 therefore contain the same limitations of one program generating another
14 program. Williams does not suggest having one program generate another
15 program (FF 10), as we found *supra*. Smith does describe generating
16 software objects within a program, but does not suggest one program
17 generating another program (FF 08, 09, & 10). The Appellants have
18 sustained their burden of showing that the Examiner erred in rejecting claims
19 3-5, 35, and 88-92 under 35 U.S.C. § 103(a) as unpatentable over Williams
20 and Smith.

23 Claims 27, 45, and 77 depend from claims 1, 30, and 62 and therefore
24 contain the same limitations of one program generating another program.

1 Williams does not suggest having one program generate another program
2 (FF 10), as we found *supra*. The Appellants have sustained their burden of
3 showing that the Examiner erred in rejecting claims 27, 45, and 77 under 35
4 U.S.C. § 103(a) as unpatentable over Williams.

5 **CONCLUSIONS OF LAW**

6 The Appellants have sustained their burden of showing that the
7 Examiner erred in rejecting claims 1-2, 6-26, 28-34, and 36-44, 46-76, and
8 78-87 under 35 U.S.C. § 102(e) as anticipated by, and claims 3-5, 27, 35, 45,
9 77, and 88-92 under 35 U.S.C. § 103(a) as unpatentable over the prior art.

10 **DECISION**

11 To summarize, our decision is as follows:

- 12 • The rejection of claims 1-2, 6-26, 28-34, and 36-44, 46-76, and 78-87
13 under 35 U.S.C. § 102(e) as anticipated by Williams is not sustained.
- 14 • The rejection of claims 3-5, 35, and 88-92 under 35 U.S.C. § 103(a) as
15 unpatentable over Williams and Smith is not sustained.
- 16 • The rejection of claims 27, 45, and 77 under 35 U.S.C. § 103(a) as
17 unpatentable over Williams is not sustained.

18 **REVERSED**

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Appeal 2007-4176
Application 09/641,021

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